REMARKS

Claims 1-4, 6, 7, 9-15, 17, 18, 20-22 and 33-36 were pending in the application. Claims 20-22 were withdrawn as directed to a non-elected invention. Claims 1 and 12 have been amended, support for which can be found throughout the specification (see, for example, p. 26, line 8) Upon entry of this amendment, claims 1-4, 6, 7, 9-15, 17, 18, and 33-36 will be pending.

No new matter has been added.

Priority:

The Office alleges that Applicants have not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. § 119(e) because the sentence to claim priority does not appear in the first sentence of the specification or in an application data sheet.

Applicants have amended the specification so that the priority claim under 35 U.S.C. § 119(e) is in the first sentence of the specification.

Sequence Listing

The Office alleges that the present Application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences as set forth in 37 C.F.R. § 1.821(a)(1) and (a)(2), but that the application fails to comply with the requirements of 37 C.F.R. § 1.821 through 1.825.

Applicants have amended the specification to include a specific sequence identifier and also enclosed herein a sequence listing that complies with the requirements of 37 C.F.R. § 1.821 through 1.825.

Rejections under 35 U.S.C. § 112

Claims 1-4, 6-7, 9-15, 17-18, and 33-36 stand rejected under 35 U.S.C. § 112, first paragraph as allegedly containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The Office alleges

that although the specification describes numerous antigens, such as pathogenic antigens, cancer antigens, and antigens linked to cells associated with autoimmune disease, the specification "does not provide any specific guidance as to particular immunogens to be combined with DR5 or provide any specific guidance concerning the use of DR5 as an immunogen." (Office Action, page 5). The Office further alleges that

> The specification, while providing a reference to the sequence of DR5 on page 85 of the specification, fails to provide an enabling disclosure for the use of DR5 as an "immunomodulatory" protein for the generation of any type of immune response following administration of plasmids encoding DR5 and immunogen.

(Office Action, page 6). The Office also alleges that "Summarizing the teaching of the prior art concerning DR5, it appears that while the literature at the time of filing does suggest a role for DR5 in regulating cell death, there is no indication that DR5 acts in any way as an 'immunomodulatory' protein." (Office Action, page 6) and therefore, the Office alleges that the present invention would "have required undue experimentation to use the invention as claimed." (Office Action, page 8) Applicants respectfully disagree.

As an initial matter (as discussed above), the Office alleges that the present specification does not "provide any specific guidance concerning the use of DR5 as an ***immunogen***." (Office Action, page 5, emphasis added). Applicants respectfully remind the Office that DR5 in the instant claim is an "immunomodulatory protein" as described in the present specification.

The present invention as claimed is enabled for one of ordinary skill in the art because contrary to the Office's allegation, there was ample support for DR5 having an immunomodulatory role and the present specification provides clear and specific guidance so that a person of ordinary skill in the art would not have to practice undue experimentation to make and/or use the present invention.

Contrary to the Office's allegation, DR5 is an immunomodulatory protein. The Office has failed to provide any evidence that would contradict Applicants' specification which states that DR5 can be used as an immunomodulatory protein. The Courts have stated:

> [A] specification disclosure which contains a teaching of the manner and process of making and using the invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented ***must*** be taken as in compliance with the enabling requirement of the first paragraph of § 112 unless there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support. (emphasis added).

In re Marzocchi, 439 F.2d 220, 223, 169 USPQ 367, 369 (CCPA 1971). Accordingly, without sufficient evidence that would give "reason to doubt" the specification, the Office must accept the statement by Applicants that DR5 is an immunomodulatory protein. The Office has cited several references in an attempt to show that there was "reason to doubt" that DR5 is an immunomodulatory protein, however, none of these references even discuss whether or not DR5 is an immunomodulatory protein. Rather the references discuss, the "Identification and Molecular Cloning of Two Novel Receptors for the cytotoxic ligand TRAIL" and "Control of Trail-Induced Apoptosis by a Family of Signaling and Decoy Receptors". These references, however, do not state that DR5 is not an immunomodulatory protein. Thus, the Office has not provided any support or evidence that would contradict the specification or "give reason to doubt the objective truth of the statements" contained within the specification.

Accordingly, one of ordinary skill in the art would be able to use the present invention using DR5 as an immunomodulatory protein because Applicants state that it can be used and the Office has not demonstrated that Applicants statements are incorrect.

The Office also alleges that the specification lacks working examples which utilize protein that correlate to DR5. The Office is reminded that the absence of working examples is not sufficient to reject claims under 35 U.S.C. § 112, first paragraph. The present specification has numerous examples of combining immunogens with immunomodulatory proteins. All that would be required of one of skill in the art is to follow the same procedures and methods described in Applicants specification using DR5 as the immunomodulatory protein and an immunogen of the artisan's choice. Performing the methods and the experiments in the present specification is routine for one of ordinary

skill in the art. Importantly, the Office has not provided support or evidence that raises doubt as to the objective truth of Applicants' assertions.

Accordingly, since the one of skill in the art would know based on the specification that DR5 is an immunomodulatory protein, the present invention is enabled because the skilled artisan has to do nothing more than follow the procedures in Applicants' specification to make and/or use the claimed invention.

In view of the foregoing, Applicants respectfully request that the rejection under 35 U.S.C. § 112, first paragraph be withdrawn.

Rejections under 35 U.S.C. § 102

Claims 1-3 and 12 stand rejected under 35 U.S.C. § 102(a) as allegedly anticipated by MacFarlane *et al.* (Journal of Biological Chemistry (1997) 272:25417-25420, hereinafter the 'MacFarlane reference"). According to the Office, the MacFarlane reference discusses "a single plasmid encoding the bacterial immunogen beta-galactosidase (lacZ) operatively linked to the RSV promoter and DR5 operatively linked to the CMV promoter." (Office Action, page 8) The Office also alleges that the MacFarlane reference discusses a "composition comprising two plasmids, where the first plasmid encodes an immunogen such as CrmA or FLAME-1 and the second plasmid encodes DR5." (Office Action, page 9). Therefore, the Office alleges that since MacFarlane teaches "all the elements of the claims as written, MacFarlane anticipates the instant invention as claimed." (*Id.*) Applicants respectfully disagree.

For a reference to anticipate a claim each and every element as set forth in the claim must be found either expressly or inherently described in a single prior art reference. An anticipation rejection requires a showing that each limitation of a claim be found in a single reference. *Atlas Powder Co. v. E.I. DuPont de Nemours & Co.*, 224 U.S.P.Q. 409, 411 (Fed. Cir. 1984).

As amended the claim 1 and 12 recite in part, "A pyrogen-free composition comprising a plasmid..." or "A pyrogen-free composition comprising two plasmids..." The MacFarlane reference does not discuss or even suggest "A pyrogen-free composition

comprising a plasmid" or "A pyrogen-free composition comprising two plasmids" as described in the claims. Therefore, the MacFarlane reference does not teach every element of the claims and fails to anticipate the claimed invention.

Claims 1-3, 6, and 12 stand rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 6,417,328 (hereinafter the "'328 patent"). The Office alleges that the '328 patent teaches all the limitations of the claims as written and therefore, anticipates the claimed invention. Applicants respectfully disagree.

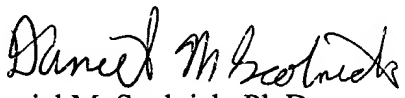
As discussed above, amended claims 1 and 12 recite, in part, "A pyrogen-free composition comprising a plasmid..." or "A pyrogen-free composition comprising two plasmids..." The '328 patent does not discuss or even suggest a pyrogen-free composition comprising a plasmid or two plasmids as described in the claims. Therefore, the '328 patent does not teach every element of the pending claims and fails to anticipate the present invention.

In view of the foregoing, Applicants respectfully request that the rejection under 35 U.S.C. § 102 be withdrawn.

IV. Conclusion

Applicants believe the claims are in condition for allowance. An early Notice of Allowance is therefore earnestly solicited. Applicants invite the Examiner to contact the undersigned at (215) 665-6928 to clarify any unresolved issues raised by this response.

Respectfully submitted,



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Attachments:

1. Paper Form of Sequence listing
2. Sequence listing on diskette